CLAIMS

What is claimed is:

1. A system for processing drill hole data such as obtained by taking a drill hole measurement, said system comprising:

means for dividing the drill hole measurement data into successive depth bands having a predetermined depth span;

means for producing for each depth band a characterization of its spectral content;

means for comparing the spectral content of a depth band with the spectral content of a next depth band and calculating an indicator that quantifies spectral change between successive depth bands;

means for integrating the spectral change indicator with respect to depth in order to obtain a spectral trend; and

means for scaling the spectral trend using an automatic gain control for a plurality of user defined gain windows.

2. A system for data representation, said system comprising:

means for displaying a spectral trend curve as a function depth;

means for displaying scaled spectral trend curves of a single drill hole as a function of depth and gain-window size; and

means for displaying spectral trend curves of multiple drill holes.

3. The system of claim 2 additionally comprising means for displaying conventional drill hole data together with spectral trend curves.

4. A method for processing drill hole data such as obtained by taking a drill hole measurement, the method comprising the steps of:

dividing the drill hole measurement data into successive depth bands having a predetermined depth span;

producing for each depth band a characterization of its spectral content;

comparing the spectral content of a depth band with the spectral content of a next depth band and calculating an indicator that quantifies spectral change between successive depth bands;

integrating the spectral change indicator with respect to depth in order to obtain a spectral trend; and

scaling the spectral trend using an automatic gain control for a plurality of user defined gain windows.

5. A method for data representation, the method comprising the steps of:

displaying a spectral trend curve as a function depth;

displaying scaled spectral trend curves of a single drill hole as a function of depth and gain-window size; and

displaying spectral trend curves of multiple drill holes.

6. The method of claim 2 additionally comprising the step of displaying conventional drill hole data together with spectral trend curves.

7. A method for data interpretation, the method comprising the steps of:

based on observed changes in spectral trend curves, defining stratigraphic units; and

based on a correlation between the spectral trend curves of a plurality of drill holes in an area and the stratigraphic units, deriving a model of geological structures of an examined area.